EARTH SYSTEM SCIENCE
Data and Services

CRYOSPHERE *Data Set Reference Sheet*   *September 2014*

Physical Properties	Data Center	Selected Data Sets and Data Collections
		Complete data set listings available through each individual data center. For more information about NASA's Earth Observing System Data and Information System (EOSDIS) data centers, see: https://earthdata.nasa.gov
Frozen Ground	**NSIDC DAAC** http://nsidc.org/daac	• MEaSUREs Global Record of Daily Landscape Freeze/Thaw Status, Version 03
Gravity Gravity Field Models, Measurements	**CDDIS** http://cddis.gsfc.nasa.gov	• Ground Network/Satellite Measurements: Daily, hourly, and sub-hourly code and phase observations from GNSS ground network; Daily and hourly files of round trip time of flight from satellite laser ranging (SLR) ground network; Time-tagged range-rate measurements from DORIS ground network • Daily and weekly precision satellite orbits derived from GNSS, SLR, and DORIS ground network observations. Note: Precise satellite orbits are required for higher level products. • Station positions and velocities from GNSS, SLR, VLBI and DORIS ground networks
	PO.DAAC http://podaac.jpl.nasa.gov	• GRACE Level 2 Monthly Gravity Field Estimates • Surface Mass Density Changes from GRACE (monthly mass grids of water equivalent thickness)
Land Ice Ice sheet topography, ice sheet volume change, glacier change	**ASF SAR DAAC** http://www.asf.alaska.edu	• AMM-1 and MAMM SAR Image Mosaics of Antarctica 100m (RADARSAT-1) • ASF Data Pool of processed SAR data and images (Seasat, PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR, AirMOSS) • Custom SAR Interferograms (ERS-1, ERS-2, JERS-1, PALSAR, RADARSAT-1) • International Polar Year SAR Datasets • UAVSAR Repeat Pass Interferometric products
	LaRC ASDC https://eosweb.larc.nasa.gov	• International Satellite Cloud Climatology Project (ISCCP) D1, D2, and ICESNOW data products • Multi-angle Imaging SpectroRadiometer (MISR) Level 1B2 Ellipsoid Data, Level 1B2 Terrain Data, Level 2 Surface Parameters, and Level 3 Component Global Land (daily, monthly, quarterly, and yearly) Products
	LP DAAC https://lpdaac.usgs.gov	• ASTER Digital Elevation Model • ASTER L1B Registered Radiance at the Sensor • ASTER Level 3 Global Digital Elevation Model (GDEM) 1 Arc-Second
	NSIDC DAAC http://nsidc.org/daac	• Antarctic 1 km DEM from Combined ERS-1 Radar and ICESat Laser Satellite Altimetry • Antarctic 5-km DEM from ERS-1 Altimetry • Antarctic Ice Velocity Data • Digital SAR Mosaic and Elevation Map of the Greenland Ice Sheet • GLAS/ICESat 1 km Laser Altimetry Digital Elevation Model of Greenland • GLAS/ICESat 500 m Laser Altimetry Digital Elevation Model of Antarctica • GLAS/ICESat L1B Global Elevation Data • GLAS/ICESat L2 Global Antarctic and Greenland Ice Sheet Altimetry Data • GLIMS Glacier Database • Greenland 5 km DEM, Ice Thickness, and Bedrock Elevation Grids • Greenland Ice Sheet Melt Characteristics Derived from Passive Microwave Data • IceBridge Aircraft Data Sets (a large collection of data sets bridging the ICESat-1 and ICESat-2 missions) • IceBridge ATM L1B Elevation and Return Strength • Images of Antarctic Ice Shelves [from AVHRR and MODIS] • MEaSUREs Antarctic Grounding Line from Differential Satellite Radar Interferometry • MEaSUREs Greenland Ice Velocity Map from InSAR Data • MEaSUREs InSAR-Based Antarctica Velocity Map • MODIS Mosaic of Antarctica (MOA) Image Map • Program for Arctic Regional Climate Assessment (PARCA) Data • Radarsat Antarctic Mapping Project Digital Elevation Model Version 2 • RAMP AMM-1 SAR Image Mosaic of Antarctica

Land Ice Ice sheet topography, ice sheet volume change, glacier change (continued)	**PO.DAAC** http://podaac.jpl.nasa.gov	• BYU Daily Browse Images of NSCAT, QuikSCAT, and SeaWinds Sigma-0 Measurements • BYU Enhanced Resolution Images of Seasat, ERS, and NSCAT Sigma-0 Measurements • BYU Enhanced Resolution Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements • BYU Local-Time-of-Day Browse Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements
Sea Ice Extent, concentration, motion, temperature	**ASF SAR DAAC** http://www.asf.alaska.edu	• AMM-1 and MAMM SAR Image Mosaics of Antarctica 100m (RADARSAT-1) • Arctic MEaSUREs sea ice dynamics products (RADARSAT-1) • ASF Data Pool of processed SAR data and images (Seasat, PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR, AirMOSS) • International Polar Year SAR Datasets
	LaRC ASDC https://eosweb.larc.nasa.gov	• First ISCCP Regional Experiment (FIRE) data sets • ISCCP D1, D2, and ICESNOW Data Products • MISR Level 1B2 Ellipsoid Data
	NSIDC DAAC http://nsidc.org/daac	• AMSR-E/Aqua Daily L3 12.5 km Brightness Temperatures, Sea Ice Concentration, and Snow Depth Polar Grids • AMSR-E/Aqua Daily L3 25 km Brightness Temperatures & Sea Ice Concentration Polar Grids • AMSR-E/Aqua Daily L3 6.25 km Sea Ice Drift Polar Grids • Bootstrap Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I • DMSP SSM/I Daily and Monthly Polar Gridded Sea Ice Concentrations • GLAS/ICESat L2 Sea Ice Altimetry Data • IceBridge Aircraft Data Sets (a large collection of data sets bridging the ICESat-1 and ICESat-2 missions) • IceBridge Sea Ice Freeboard, Snow Depth and Thickness • MODIS/Aqua Sea Ice Extent 5-Min L2 Swath 1km Data • MODIS/Aqua Sea Ice Extent and IST Daily L3 Global 1km & 4km EASE-Grid Data for Day and Night • MODIS/Terra Sea Ice Extent 5-Min L2 Swath 1km Data • MODIS/Terra Sea Ice Extent and IST Daily L3 Global 1km & 4km EASE-Grid Data for Day and Night • NASA Scatterometer Climate Pathfinder (SCP) Arctic and Antarctic Ice Extent from QuikSCAT, 1999-2004 • Near-Real-Time DMSP SSM/I-SSMIS Daily Polar Gridded Sea Ice Concentrations • Near-Real-Time SSM/I-SSMIS EASE-Grid Daily Global Ice Concentration and Snow Extent • Polar Pathfinder Daily 25 km EASE-Grid Sea Ice Motion Vectors • Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I Passive Microwave Data • Sea Ice Trends and Climatologies from SMMR and SSM/I • When the Weather is Uggianaqtug: Inuit Observations of Environmental Change
	PO.DAAC http://podaac,jpl.nasa.gov	• BYU Daily Browse Images of NSCAT, QuikSCAT, and SeaWinds Sigma-0 Measurements • BYU Enhanced Resolution Images of Seasat, ERS, and NSCAT Sigma-0 Measurements • BYU Enhanced Resolution Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements • BYU Local-Time-of-Day Browse Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements • SeaWinds on QuikSCAT Arctic Sea Ice Age Classification (BYU/SCP)
Snow Cover Extent, water, equivalent, depth	**ASF SAR DAAC** http://www.asf.alaska.edu	• Global snow cover time series animation (MEaSUREs Wetlands Extent and Inundated Wetlands Time Series)
	LaRC ASDC https://eosweb.larc.nasa.gov	• ISCCP D1, D2, and ICESNOW data products • MISR Level 1B2 Ellipsoid Data and Level 1B2 Terrain Data
	NSIDC DAAC http://nsidc.org/daac	• AMSR-E/Aqua Daily, 5-day, and Monthly L3 Global Snow Water Equivalent EASE-Grids • CLPX-Airborne: Airborne GPS Bistatic Radar • CLPX-Ground: Snow Measurements Data • CLPX-Satellite: MODIS Radiances, Reflectances, Snow Cover and Related Grids • Global EASE-Grid 8-day Blended SSM/I and MODIS Snow Cover Data • Global Monthly EASE-Grid Snow Water Equivalent (SWE) Climatology • Historical Soviet Daily Snow Depth Version 2 (HSDSD) • IceBridge Accumulation Radar L1B Geolocated Radar Echo Strength Profiles • IceBridge Sea Ice Freeboard, Snow Depth and Thickness • IceBridge Snow Radar L1B Geolocated Radar Echo Strength Profiles • IMS Daily Northern Hemisphere Snow and Ice Analysis at 4 km and 24 km Resolution • MODIS/Aqua L3 Snow Cover Daily, 8-day, and Monthly Data • MODIS/Aqua Snow Cover 5-Min L2 Swath 500m • MODIS/Terra L3 Snow Cover Daily, 8-day, and Monthly Data • MODIS/Terra Snow Cover 5-Min L2 Swath 500m

| Snow Cover
Extent, water,
equivalent, depth
(continued) | NSIDC DAAC
(continued) | • Near-Real-Time SSM/I-SSMIS EASE-Grid Daily Global Ice Concentration and Snow Extent
• Nimbus-7 SMMR Derived Monthly Global Snow Cover and Snow Depth
• Northern Hemisphere EASE-Grid Weekly Snow Cover and Sea Ice Extent Version 3
• Program for Arctic Regional Climate Assessment (PARCA) Data Sets
• When the Weather is Uggianaqtuq: Inuit Observations of Environmental Change |
| | ORNL DAAC
http://daac.ornl.gov | • BOREAS RSS-08 Snow Maps Derived from Landsat TM Imagery
• ISLSCP II Northern Hemisphere Monthly Snow Cover Extent |

ASF SAR DAAC	Alaska Satellite Facility (ASF) Synthetic Aperture Radar (SAR) DAAC
CDDIS	Crustal Dynamics Data Information System
LaRC ASDC	Langley Research Center (LaRC) Atmospheric Science Data Center (ASDC)
LP DAAC	Land Processes DAAC
NSIDC DAAC	National Snow and Ice Data Center DAAC
ORNL DAAC	Oak Ridge National Laboratory DAAC
PO.DAAC	Physical Oceanography DAAC